

REMARKS

Claims 8, 11-14 and 17-18 remain pending after amendment.

Claim Amendments

By this amendment, claims 10 and 15 are cancelled. The limitations of cancelled claim 10 are added to claims 8 and 16. Claim 15 is redundant and thus cancelled. New claim 17 is added, support for which resides at page 10, lines 10-18. New claim 18 corresponds to prior claim 16. No new matter is added by this amendment.

The Claimed Invention

Applicants' invention is directed to a cylindrical printing blanket comprising a seamless sleeve and a sheet-like blanket having a first fabric layer, a compressive layer, a second fabric layer, and a surface printing layer, said sheet-like blanket being bonded onto the outer surface of said seamless sleeve. A layer of a spirally wound thread in an adhesive is used to bond the blanket to the sleeve.

The claimed invention is characterized in that the thread layer is spirally wound on the bottom side of the compressive layer in order to tighten the sleeve, with the sleeve mounted on a cylinder of a diameter smaller than the cylinder of the

printing press. Applicants have found that higher durability can be achieved by an embodiment where the sleeve is held in place by the thread layer. See the disclosure at page 9 of the specification in this regard. Further, the sleeve-like blanket of the present invention can be attached to the printing cylinder without slipping even when used in high-speed printing.

The following distinctions exist between the teachings of the prior art (as exemplified by the Okubo et al patent) and the claimed invention:

- (1) Applicants' claimed blanket has fabric layers instead of the base layer of Okubo et al;
- (2) Okubo et al has a non-stretchable layer (the thread layer) between the compressive layer and the surface printing layer. In the present invention the thread layer is formed by winding a thread in spiral configuration on a sleeve via an adhesive elastomer, an embodiment which is distinct from the teachings of Okubo et al.

Further, the claimed blanket possesses advantages not otherwise possessed by the blanket of Okubo et al. The Examiner's attention is directed to the comparative data at Tables 8 and 9 of the instant specification. As discussed

above, Comparative Example 2 in the present specification corresponds to the method of Example 3 of Okubo et al.

The results of Comparative Example 2 are discussed at page 45 of the specification as follows:

"In Table 8, Comparative Example 2 that is the cylindrical printing blanket of the prior art experienced quicker setting of the upper layer due to creep since the thread layer formed over the compressive layer and below the printing layer by winding the thread while applying tension generates a compressive stress in the layers below the compressive layer. The cylindrical printing blanket of the present invention, on the other hand, does not experience early set in fatigue since the compressive layer is not subject to excessive stress. Comparison of the amount of set in fatigue is shown in Fig. 3".

In view of the above distinctions that exist between the claimed invention and the cited prior art, and given the advantages over the cited prior art demonstrated to exist in the comparative data presented in the specification, the claimed invention is neither disclosed nor suggested by the prior art.

Rejection of Claims 8, 10, 14 and 15 under 35 USC 103(a)

Claims 8, 10, 14 and 15 stand rejected under 35 USC 103(a) as being unpatentable over Batti et al in view of Okubo et al.

In support of the rejection, the Examiner states the following at page 2 of the Action:

"Batti et al teaches a cylindrical printing blanket comprising a seamless sleeve (see col. 1, lines 25-28) and a sheet-like blanket being bonded to an outer surface of said seamless sleeve, said sheet-like blanket comprising in order a fabric layer (7), a compressive layer (3) and a surface printing layer (6). However, Batti doesn't teach the sheet-like blanket being bonded by a spirally wound threaded layer. Okubo et al teaches the use of a spirally wound threaded layer (32a) to bond together layers of a blanket. To have a sheet-like blanket cylinder bonded by a threaded layer is obvious in view of the teachings of Okubo et al since Batti et al teaches a threaded layer is beneficial for providing a tight sealing agent."

This rejection respectfully is traversed to the extent deemed to apply to the claims as amended.

Batti is directed to a printing blanket for offset printing. The blanket has a lithographic surface, a continuous layer, at least one reinforcing layer with low stretch characteristics, and a fabric layer located on the side of the reinforcing layer opposite to the lithographic surface. The compressible layer is located between the lithographic surface and the reinforcing layer.

Batti et al teaches at column 1, lines 17-53 that there are two types of printing blankets. The first type is a blanket produced continuously in the form of a roll and then cut to size according to the dimensions of the blanket cylinder upon which they are to be installed. The blanket of Batti et al belongs to this first type. The second type of blanket is individually manufactured for use with the blanket cylinder upon which it is to be installed and can be slid onto a blanket cylinder like a sleeve (i.e., a "sleeve printing blanket"). Applicants' invention belongs to this second type of printing blanket. The respective printing blankets are entirely distinct from one another.

Applicants' printing blanket can be differentiated from that of Batti et al as shown in the following table:

	Batti et al.	The claimed invention
Type	Sheet-like blanket (Cutting type blanket) See Fig. 1, for example.	Sleeve-like blanket See Fig. 1.
Feature (constitutional layer)	Fabric layer: Located on a side of the at least one reinforcing layer.	Thread layer: Spirally wound on an adhesive elastomer on the direct surface of seamless sleeve.
(Function)	Bounding of compressible layer and reinforcing layer (see col. 2, lines 48-51). Moisture absorption and adverse corrosive effect (see col. 4, lines 16-23).	Improvement of function holding the sleeve on the cylinder (see page 13).
(Tension)	No greater than 3% in both the length and cross direction (see col. 5, lines 34-44)	200-700g tension/a thread (see page 15, lines 17- 20)
Application Method	Sheet-like blanket is wound on the cylinder under tension when used in printing	Sleeve-like blanket is installed to the cylinder.

The Examiner acknowledges in the action that Batti et al patent neither discloses nor suggests the claimed invention, at least in part due to the failure of the reference to "teach the sheet-like being bonded by a spirally wound threaded layer."

While Okubo et al is cited to teach the use of a spirally wound threaded layer (32a) to bond together layers of a blanket, Okubo et al does not cure the deficiencies of Batti et al in the manner required to result in the claimed invention.

Okubo et al discloses a printing blanket comprising a seamless base layer comprising an elastomer which is substantially incompressible; a porous seamless compressible layer comprising an elastomer; a non-stretchable layer comprising a non-stretchable thread which is wound on the compressible layer in helical fashion along the circumferential direction; and a seamless surface printing layer comprising an elastomer, all of which are provided in the stated order on an outer peripheral surface of a cylindrical sleeve mounted on a blanket cylinder.

There is a significant difference between applicants' invention and the teachings of Okubo et al with respect to the position of the thread layer during formation of the printing blanket. As to the formation of the non-stretchable thread layer, Okubo et al states as follows:

"The base layer also functions, together with the non-stretchable layer, to prevent the elastic rebound caused by the printing blanket when it is released from compression after passing the nip deformed portion, from generating a large expansion in the radial direction and the resulting ordinary waves" (column 3, lines 20-25).

In the present invention, it is unnecessary to arrange a non-stretchable layer as in Okubo et al because the surface printing layer is arranged on the compressive layer via a fabric layer 5a (Figure 1). As discussed above, the claimed blanket is superior to that of Okubo et al as demonstrated by Comparative Example 2 of applicants' specification.

In support of the rejection, the Examiner makes reference to the use of spirally wound thread layer 32a to bond together the layers of the blanket. Applicants find no reference in Okubo to layer 32a. In any event, in the reference, the non-stretchable layer 3 is wound on the adhesive layer 33 between the porous compressible layer 2 and the surface printing layer 4 as illustrated in Figure 1. This positioning is different from the positioning recited in applicants' claims.

The Examiner further states that "To have a sheet-like blanket cylinder bonded by a thread layer is obvious in view of the teachings of Okubo et al since Batti et al teaches a thread layer is beneficial for providing a tight sealing agent." Applicants cannot find any mention in Batti of any teaching directed to a thread layer being "beneficial for providing a tight sealing agent".

The Examiner not only fails to identify the necessary motivation in Okubo to modify Batti to result in the claimed invention, but the respective teachings of the references cannot be combined to result in the claimed invention in the manner asserted by the Examiner.

Further, the references, taken either singly or in combination, fail to disclose or suggest the embodiment of amended claim 8, which now requires the presence of first and second fabric layers of specified thickness on each side of the compressive layer. The references also fail to teach or suggest the formation of the thread-wound sleeve on a cylinder of a diameter that is 0.05% to 1.0% smaller than the diameter of a cylinder of a printing press upon which the blanket is to be mounted.

In view of the above, applicants' claimed invention is neither disclosed nor suggested by the combined teachings of the references.

The rejection is thus without basis and should be withdrawn.

Rejection of Claims 11-13 under 35 USC 103(a)

Claims 11-13 stand rejected under 35 USC 103(a) as being unpatentable over Batti et al in view of Kobler et al. This rejection respectfully is traversed to the extent deemed to apply to the claims as amended.

The deficiencies of Batti et al. are discussed at length above. Such deficiencies are not addressed by the Kobler patent which is cited solely to show the use of a sealed seam. As a result, the rejection is without basis and still should be withdrawn.

The application is now believed to be in condition for allowance and an early indication of same is earnestly solicited.

In the event that any outstanding matters remain in this application, Applicants request that the Examiner contact James W. Hellwege (Reg. No. 28,808) at (703) 205-8000 to discuss such matters.

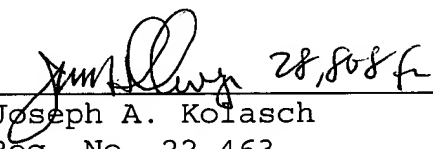
Applicant respectfully petitions under the provisions of 37 CFR 1.136(a) and 1.17 for a three month extension of time in which to respond to the Examiner's Office Action. The Extension of Time Fee in the amount of \$930.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Very truly yours,

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MARKED UP COPY OF CLAIM AMENDMENTS

Claim 10 is cancelled without prejudice or disclaimer.

8. (Thrice Amended) A cylindrical printing blanket comprising a seamless sleeve and a sheet-like blanket being bonded to an outer surface of said seamless sleeve,

said sheet-like blanket comprising in order a first fabric layer having a thickness in the range of 0.1 to 1.5 mm, [a fabric layer,] a compressive layer, a second fabric layer having a thickness in the range of 0.1 to 1.5 mm, and a surface printing layer, with said sheet-like blanket being bonded to a thread layer spirally wound on an adhesive elastomer layer around said seamless sleeve,

wherein said thread layer is wound on said sleeve mounted on a cylinder having a diameter that is 0.05% to 1.0% smaller than the diameter of a cylinder of a printing press upon which said cylindrical printing blanket is to be mounted, with the diameter of said sleeve being equal to or slightly smaller than the diameter of said cylinder of said printing press.

14. (Amended) The cylinder printing blanket according to Claim [8] 13, wherein said seam is sealed by filling [which is filled] with a compressive elastomer.

Claims 17 and 18 have been added.